

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/22225

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01C 21/20, 21/34, 21/36

US CL : 701/201, 202, 208, 209, 210, 211; 340/995.12, 995.14, 995.16, 995.19, 995.23, 995.27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 701/201, 202, 208, 209, 210, 211; 340/995.12, 995.14, 995.16, 995.19, 995.23, 995.27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST search: destination, route, modify, editing, changing, user preference

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,266,613 B1 (NIMURA et al) 24 July 2001 (26.07.2003), the abstract, figure 1 and claim 1.	1-38
Y	US 6,119,095 A (MORITA) 12 September 2000 (12.09.2000), figure 1 and column 2.	1-38
Y	US 5,559,707 A (DELORME et al) 24 September 1996 (24.09.1996), figures 1H, 2, 3, 4B and the related text.	1-38
Y	US 6,175,805 B1 (ABE) 16 January 2001 (16.01.2001), figures 2A, 2B, 3 and columns 1-3.	1-38
A	US 6,362,751 B1 (UPPARAPALLI) 26 March 2002 (26.03.2002), the abstract and figure 2.	1-38
A	US 6,034,626 A (MAEKAWA et al) 07 March 2000 (07.03.2000), the abstract, figures 1 and 9.	1-38.
A,P	US 6,542,811 B2 (DOI) 01 April 2003 (01.04.2003), figures 3, 5 and the related text.	1-38.



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

12 January 2004 (12.01.2004)

Date of mailing of the international search report

05 MAR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

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